

Instructions

P6460 DATA ACQUISITION PROBE



4345-1

P6460 data acquisition probe.

INTRODUCTION

The P6460 is a 100 MHz data acquisition probe suitable for use with the 1240/1241 Logic Analyzer 1240D1 and 1240D2 Acquisition Cards and the DAS 91A24 and 91AE24 Data Acquisition Modules. The P6460 has nine data channels and a clock line. When used with the DAS, one of the data channels serves as a clock qualifier.

The P6460 probe can also be used with the following DAS modules:

- 91S16/32 Pattern Generation Module
- 92A16/16E Data Acquisition Module
- 92S16/32 Pattern Generation Module

These Instructions contain the service information for this probe. For convenience, put a copy of them in the back of the

service manual for the logic analyzer that the probe will usually be used with.

Labels

Two labels are included with your probe. The one with an 8 in the upper left corner and a C/Q in the upper right corner is for use with 1240/1241 Logic Analyzer. The label with a Q in the upper left corner and a CK in the upper right corner is for use with DAS91A24 and 91AE24 Data Acquisition Modules.

Operator's Information

This manual contains primarily service information. For operator's information, refer to the operator's manual of the instrument that the probe is to be used with, either the *1240/1241 Logic Analyzer Operator's Manual* or the *DAS 9100 Series Operator's Manual*.

ACCESSORIES

Standard Accessories:

1 Instruction Sheet	070-4345-00
1 Lead Set, 10 inch	012-0747-00
1 Package of 12 Probe Tips (each tip is a 206-0222-00)	020-1386-00
2 Ground (or VL) Sense Leads, 5 inch with Pomona Hook Tips (344-0267-00)	012-0989-00
2 Alligator Clips (substitute for hook tips above)	344-0046-00

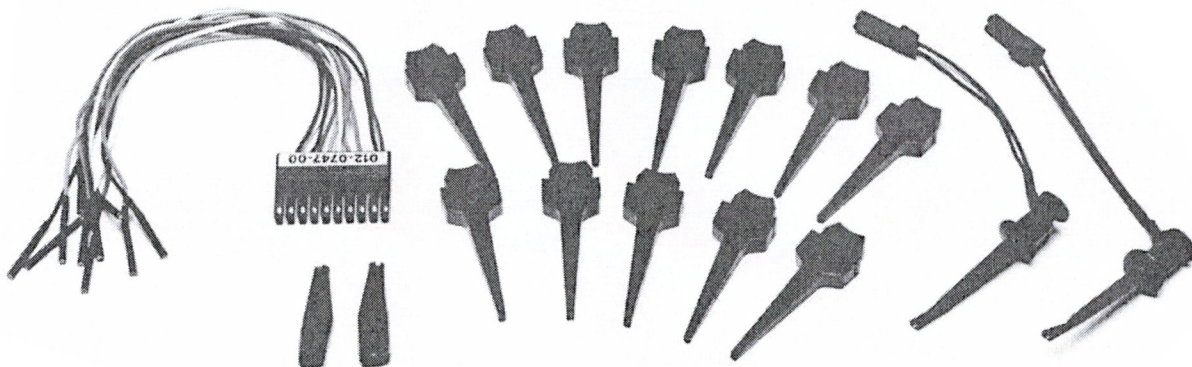
When ordering the P6460 for the 92A16 use the part number 010-6460-16. This insures you will receive the appropriate standard accessories for the 92A16/16E listed below.

010-6460-16 Standard Accessories:

1 Instruction Sheet	070-4345-00
1 Lead Set, 5 inch	012-0987-00
2 Ground VL Sense Leads, 5 inch with Pomona Hook Tips (344-0267-00)	012-0989-00
2 Alligator Clips (substitute for hook tips above)	344-0046-00

Optional Accessories:

Flying Lead Set, 5 inches long	012-0987-00
Flying Lead Set, 25 cm long	012-0800-00
40-pin Univ. Probe Intfc. Kit	020-1041-00
1240 Diagnostic Lead Set	198-5069-00
Diagnostic Lead Set, 10 inches long	012-1000-00
Package of 10 Ground (or VL) Sense Leads with Pomona Hook Tips (344-0267-00)	012-0989-01
GPIB Connector/Adapter	103-0209-00
IC Extractor, 16 pin	003-0709-00
Adapter, Test Clip, 16 DIP	015-0330-00
Adapter, Test Clip, 40 DIP, 10 cm cable (requires 380-0560-05 Adapter)	015-0339-02
Adapter, Test Clip, 40 DIP, 30 cm cable (requires 380-0560-05 Adapter)	015-0339-00
Adapter, required for use with 40 DIP Adapters	380-0560-05



4345-2

Standard accessories for the P6460.

GROUND CONNECTIONS AND FREQUENCY

For clock operating frequencies up to 25 MHz, the 10-inch lead sets (012-0747-00 or 012-0800-00) with one USER'S GND lead connected are sufficient.

For clock operating frequencies above 25 MHz but below 50 MHz, 10-inch lead sets may be used if both USER'S GND leads are connected.

For frequencies above 50 MHz and noisy environments, be sure to use the 5-inch lead sets (012-0987-00) and both USER'S GND leads with alligator clips.

SERVICE INFORMATION

WARNING

Disconnect power before removing protective coverings, soldering, or replacing components.

TEKTRONIX FIELD SERVICE

Service of Tektronix products is available from Tektronix Service Centers around the world. Contact your local sales or service organization for more information.

SPECIFICATIONS

Table 1
ELECTRICAL SPECIFICATIONS

Characteristic	Performance Requirements	Supplemental Information
MODULE-TO-PROBE SIGNALS		
Max. Operating Power Requirements		+5 V ($\pm 5\%$) at 600 mA when 20 output lines are terminated to +3 V through 60 Ω . at 300 mA when all output lines are unterminated
PROBE-TO-MODULE SIGNALS		
Data Channel Signal		Differential ECL Vcc = +5 V Vee = Gnd
User's Ground Sense		< 100 Ω to user's ground
Input Resistance	1 M $\Omega \pm 1\%$	
Input Capacitance		5 pF nominal
Max. Non-Destructive Input Voltage Range		± 40 V (DC + peak AC)
Max. Voltage Between Any Two Inputs		± 60 V (DC + peak AC)
Operating Input Voltage Range		From -40 V to input threshold's voltage + 10 V (+ 30 V for RS-232 only)
Threshold Offset and Accuracy		$\pm 0.25\%$ of threshold ± 50 mV
Minimum Input Swing		0.5 V p-p centered on the threshold
Minimum Pulse Width (with input 250 mV over the threshold from + 0.5 V and - 0.5 V)		4 ns at threshold

Table 2
ENVIRONMENTAL SPECIFICATIONS

Characteristic	Description
Temperature Operating Storage	-15°C to +55°C -62°C to +75°C
Humidity	95% to 97% relative humidity
Altitude Operating Non-operating	4.5 km (15,000 ft.) 15 km (50,000 ft.)
Electrical Discharge	5 kV maximum from 200 pf with 2K Ω series resistance

STATIC PRECAUTIONS

CAUTION

Static discharge can damage any semiconductor in this instrument.

Observe the following precautions to avoid static damage:

1. Minimize handling of static-sensitive components.
2. Transport and store static-sensitive components or assemblies in their original containers, or on a metal rail, or on conductive foam. Label any package that contains static-sensitive components or assemblies.
3. Discharge the static voltage from your body by wearing a wrist strap while handling these components. Servicing static-sensitive assemblies should be performed only in a static-free work station by qualified service personnel.

Table 3
PHYSICAL SPECIFICATIONS

Characteristic	Description
Weight	12 oz.
Overall Dimensions	
Pod	4.5 in. long, 2.2 in. wide, 0.85 in. deep
Cable	78.75 in. (2 m) \pm 10%

4. Nothing capable of generating or holding a static charge should be allowed on the work station surface.
5. Keep the component leads shorted together whenever possible.
6. Pick up components by the body, never by the leads.
7. Do not slide the components over any surface.
8. Avoid handling components in areas that have a floor or work-surface covering capable of generating a static charge.
9. Use a soldering iron that is connected to earth ground.
10. Use only special anti-static suction type or wick type desoldering tools.

NOTE

Damage to electrical components may not be immediately apparent. Always follow the precautionary measures listed above when handling static-sensitive components.

PERFORMANCE CHECK

Specification Checked

The input resistance of each channel should be $1\text{ M}\Omega \pm 1\%$.

Required Equipment

One digital multimeter with at least 0.2% accuracy at $1\text{ M}\Omega$.
For example, the Tektronix DM 5010.

Procedure

1. With the probe disconnected, measure the resistance between the input to the channel you are checking and any other channel. Call this value R_a .

2. Next, measure the resistance between the input to the channel you want to measure and a third channel. Call this value R_b .

3. Finally, measure the resistance between the two other channels. Call this value R_c .

4. Calculate the value of the input resistance of the original channel using:

$$R_{input} = \frac{R_a + R_b - R_c}{2}$$

REPLACEABLE ELECTRICAL PARTS

PARTS ORDERING INFORMATION

Replacement parts are available from or through your local Tektronix, Inc. Field Office or representative.

Changes to Tektronix instruments are sometimes made to accommodate improved components as they become available, and to give you the benefit of the latest circuit improvements developed in our engineering department. It is therefore important, when ordering parts, to include the following information in your order: Part number, instrument type or number, serial number, and modification number if applicable.

If a part you have ordered has been replaced with a new or improved part, your local Tektronix, Inc. Field Office or representative will contact you concerning any change in part number.

Change information, if any, is located at the rear of this manual.

LIST OF ASSEMBLIES

A list of assemblies can be found at the beginning of the Electrical Parts List. The assemblies are listed in numerical order. When the complete component number of a part is known, this list will identify the assembly in which the part is located.

CROSS INDEX-MFR. CODE NUMBER TO MANUFACTURER

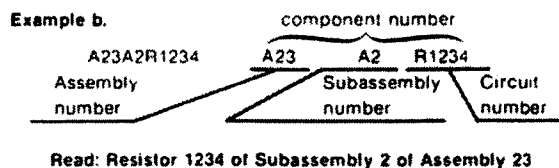
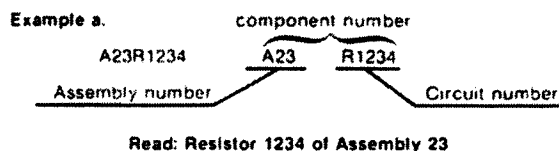
The Mfr. Code Number to Manufacturer index for the Electrical Parts List is located immediately after this page. The Cross Index provides codes, names and addresses of manufacturers of components listed in the Electrical Parts List.

ABBREVIATIONS

Abbreviations conform to American National Standard Y1.1

COMPONENT NUMBER (column one of the Electrical Parts List)

A numbering method has been used to identify assemblies, subassemblies and parts. Examples of this numbering method and typical expansions are illustrated by the following:



Only the circuit number will appear on the diagrams and circuit board illustrations. Each diagram and circuit board illustration is clearly marked with the assembly number. Assembly numbers are also marked on the mechanical exploded views located in the Mechanical Parts List. The component number is obtained by adding the assembly number prefix to the circuit number.

The Electrical Parts List is divided and arranged by assemblies in numerical sequence (e.g., assembly A1 with its subassemblies and parts, precedes assembly A2 with its subassemblies and parts).

Chassis-mounted parts have no assembly number prefix and are located at the end of the Electrical Parts List.

TEKTRONIX PART NO. (column two of the Electrical Parts List)

Indicates part number to be used when ordering replacement part from Tektronix.

SERIAL/MODEL NO. (columns three and four of the Electrical Parts List)

Column three (3) indicates the serial number at which the part was first used. Column four (4) indicates the serial number at which the part was removed. No serial number entered indicates part is good for all serial numbers.

NAME & DESCRIPTION (column five of the Electrical Parts List)

In the Parts List, an Item Name is separated from the description by a colon (:). Because of space limitations, an Item Name may sometimes appear as incomplete. For further Item Name identification, the U.S. Federal Cataloging Handbook H6-1 can be utilized where possible.

MFR. CODE (column six of the Electrical Parts List)

Indicates the code number of the actual manufacturer of the part. (Code to name and address cross reference can be found immediately after this page.)

MFR. PART NUMBER (column seven of the Electrical Parts List)

Indicates actual manufacturer's part number.

CROSS INDEX - MFR. CODE NUMBER TO MANUFACTURER

Mfr. Code	Manufacturer	Address	City, State, Zip Code
01121	ALLEN-BRADLEY CO	1201 S 2ND ST	MILWAUKEE WI 53204-2410
04222	AVX CERAMICS	19TH AVE SOUTH	MYRTLE BEACH SC 29577
	DIV OF AVX CORP	P O BOX 867	
07263	FAIRCHILD SEMICONDUCTOR CORP	10400 RIDGEVIEW CT	CUPERTINO CA 95014
	NORTH AMERICAN SALES		
	SUB OF SCHLUMBERGER LTD MS 118		
19701	MEPCO/CENTRALAB	PO BOX 760	MINERAL WELLS TX 76067-0760
	A NORTH AMERICAN PHILIPS CO		
	MINERAL WELLS AIRPORT		
22526	DU PONT E I DE NEMOURS AND CO INC	515 FISHING CREEK RD	NEW CUMBERLAND PA 17070-3007
	DU PONT CONNECTOR SYSTEMS		
	DIV MILITARY PRODUCTS GROUP		
24546	CORNING GLASS WORKS	550 HIGH ST	BRADFORD PA 16701-3737
27014	NATIONAL SEMICONDUCTOR CORP	2900 SEMICONDUCTOR DR	SANTA CLARA CA 95051-0606
80009	TEKTRONIX INC	14150 SW KARL BRAUN DR	BEAVERTON OR 97077-0001
		PO BOX 500	
81073	GRAYHILL INC	561 HILLGROVE AVE	LA GRANGE IL 60525-5914
		PO BOX 10373	

Component No.	Tektronix Part No.	Serial/Assembly No. Effective Discont	Name & Description	Mfr. Code	Mfr. Part No.
A70	672-1119-02		CIRCUIT BD ASSY:MAIN	80009	672-1119-02
A70C104	283-0186-00		CAP,FXD,CER DI:27PF,5%,50V	04222	SR155A 270JAA
A70C121	283-0177-00		CAP,FXD,CER DI:1UF,+80-20%,25V	04222	SR305E105ZAA
A70C122	283-0177-00		CAP,FXD,CER DI:1UF,+80-20%,25V	04222	SR305E105ZAA
A70CR115	152-0333-00		SEMICON DVC,DI:SW,S1,55V,200MA,DO-35	07263	FDH-6012
A70DL319	175-1580-01		CABLE,SP,ELEC:26 AWG SOLID TWISTED PAIR	80009	175-1580-01
A70J100	131-1811-00		TERM SET,PIN:10,0.025 SQ ON 0.15 CTR (ALSO INCLUDES A70J200 & A70J300)	22526	65595-110
A70J126	131-2615-00		CONN,RCPT,ELEC:CKT BD,RTANG,17/34 CONT,MALE	22526	65820-005
A70J135	196-0797-00		FLEX CIRCUIT:36 CONDUCTOR,COPPER	80009	196-0797-00
A70J200	131-1811-00		TERM SET,PIN:10,0.025 SQ ON 0.15 CTR (ALSO INCLUDES A70J100 & A70J300)	22526	65595-110
A70J300	131-1811-00		TERM SET,PIN:10,0.025 SQ ON 0.15 CTR (ALSO INCLUDES A70J100 & A70J200)	22526	65595-110
A70J301	131-1812-00		TERM SET,PIN:10,0.025 SQ ON 0.15 CTR	22526	65603-110
A70R104	317-0111-00		RES,FXD,CMPSN:110 OHM,5%,0.125W	01121	BB1115
A70R105	317-0111-00		RES,FXD,CMPSN:110 OHM,5%,0.125W	01121	BB1115
A70R106	317-0100-00		RES,FXD,CMPSN:10 OHM,5%,0.125W	01121	BB1005
A70R107	317-0111-00		RES,FXD,CMPSN:110 OHM,5%,0.125W	01121	BB1115
A70R108	317-0111-00		RES,FXD,CMPSN:110 OHM,5%,0.125W	01121	BB1115
A70R109	307-0706-00		RES NTWK,FXD,F1:4,10K OHM,2%,0.2W EA	01121	208B103
A70R204	317-0111-00		RES,FXD,CMPSN:110 OHM,5%,0.125W	01121	BB1115
A70R205	317-0111-00		RES,FXD,CMPSN:110 OHM,5%,0.125W	01121	BB1115
A70R208	317-0111-00		RES,FXD,CMPSN:110 OHM,5%,0.125W	01121	BB1115
A70R221	321-0292-07		RES,FXD,FILM:10.7K OHM,0.1%,0.125W,TC=T9	24546	NE55E1072B
A70R222	321-0463-00		RES,FXD,FILM:649K OHM,1%,0.125W	19701	5033ED649KOF
A70R304	317-0111-00		RES,FXD,CMPSN:110 OHM,5%,0.125W	01121	BB1115
A70R306	317-0111-00		RES,FXD,CMPSN:110 OHM,5%,0.125W	01121	BB1115
A70R308	317-0111-00		RES,FXD,CMPSN:110 OHM,5%,0.125W	01121	BB1115
A70R309	317-0151-00		RES,FXD,CMPSN:150 OHM,5%,0.125W	01121	BB1515
A70R313	317-0510-00		RES,FXD,CMPSN:51 OHM,5%,0.125W	01121	BB5105
A70S100	260-0735-01		SWITCH,PUSH:T,NO CONTACT,BLACK BTN	81073	39-3
A70U115	156-0625-01		MICROCKT,DGTL:CMOS,8 BIT PRL	27014	74C165NA+
A70J302	-----		MICROCIRCUIT,D1:LOGIC ACQ CIRCUIT (NOT REPLACEABLE,ORDER 672-1119-01)		
A70W120	195-1715-00		LEAD,ELECTRICAL:26 AWG,2.5 L,9-2	80009	195-1715-00

DIAGRAMS AND CIRCUIT BOARD ILLUSTRATIONS

Symbols

Graphic symbols and class designation letters are based on ANSI Standard Y32.2-1975.

Logic symbology is based on ANSI Y32.14-1973 in terms of positive logic. Logic symbols depict the logic function performed and may differ from the manufacturer's data.

The overline on a signal name indicates that the signal performs its intended function when it is in the low state.

Abbreviations are based on ANSI Y1.1-1972.

Other ANSI standards that are used in the preparation of diagrams by Tektronix, Inc. are:

Y14.15, 1966 Drafting Practices.
Y14.2, 1973 Line Conventions and Lettering.
Y10.5, 1968 Letter Symbols for Quantities Used in Electrical Science and Electrical Engineering.

American National Standard Institute
1430 Broadway
New York, New York 10018

Component Values

Electrical components shown on the diagrams are in the following units unless noted otherwise:

Capacitors = Values one or greater are in picofarads (pF).
Values less than one are in microfarads (μ F).

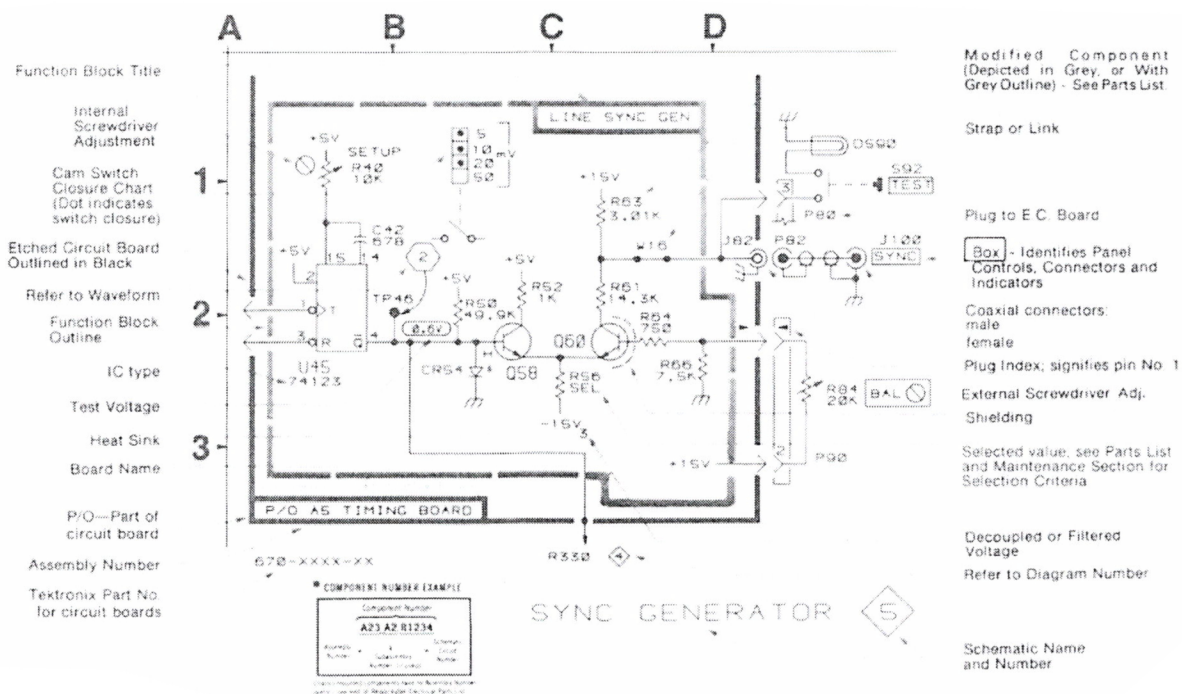
Resistors = Ohms (Ω).

———— The information and special symbols below may appear in this manual. ————

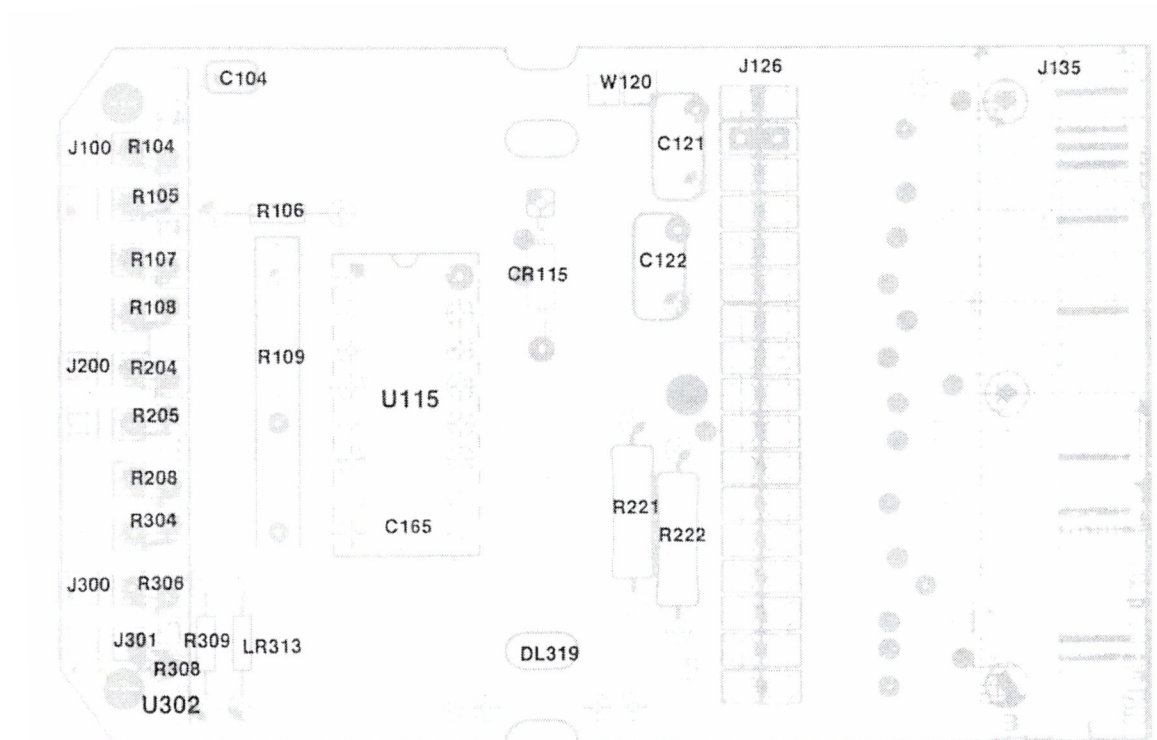
Assembly Numbers and Grid Coordinates

Each assembly in the instrument is assigned an assembly number (e.g., A20). The assembly number appears on the circuit board outline on the diagram, in the title for the circuit board component location illustration, and in the lookup table for the schematic diagram and

corresponding component locator illustration. The Replaceable Electrical Parts list is arranged by assemblies in numerical sequence; the components are listed by component number *(see following illustration for constructing a component number).



P6460

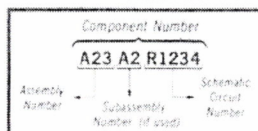


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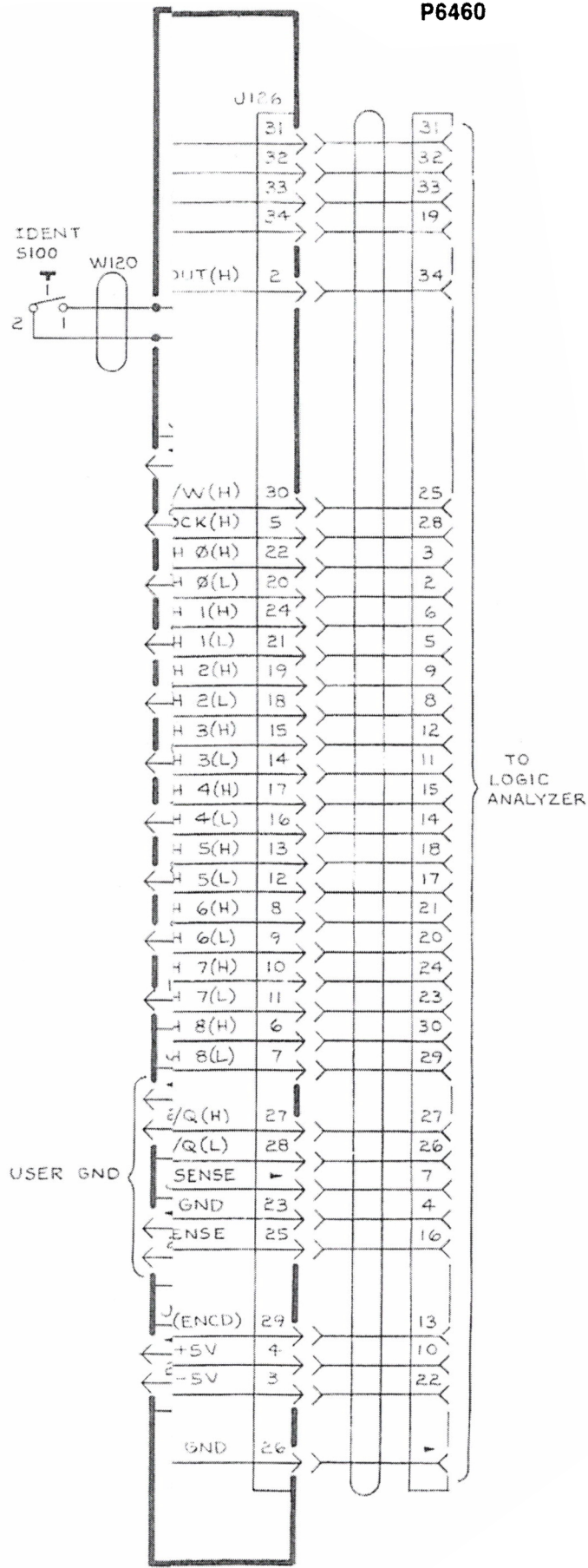
P6460 Board

 Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE



Classy-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.



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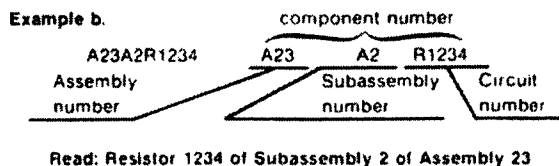
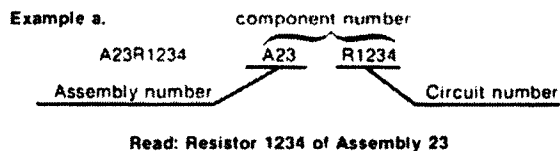
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MFR. CODE (column six of the Electrical Parts List)

Indicates the code number of the actual manufacturer of the part. (Code to name and address cross reference can be found immediately after this page.)

MFR. PART NUMBER (column seven of the Electrical Parts List)

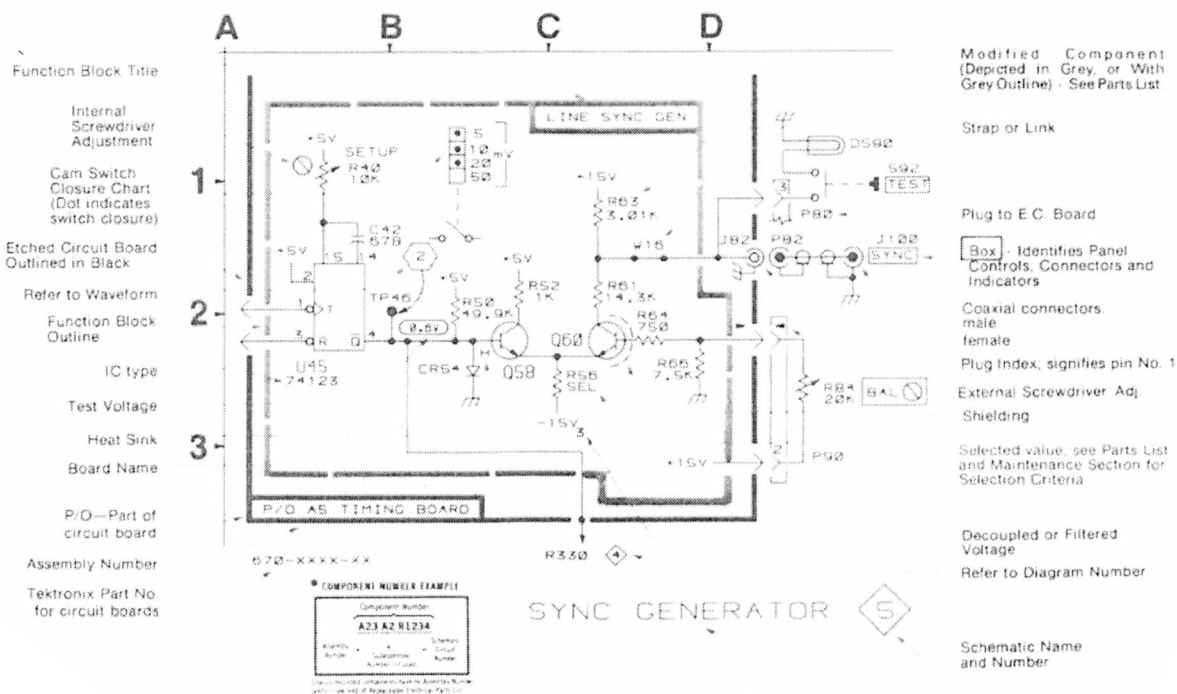
Indicates actual manufacturer's part number.

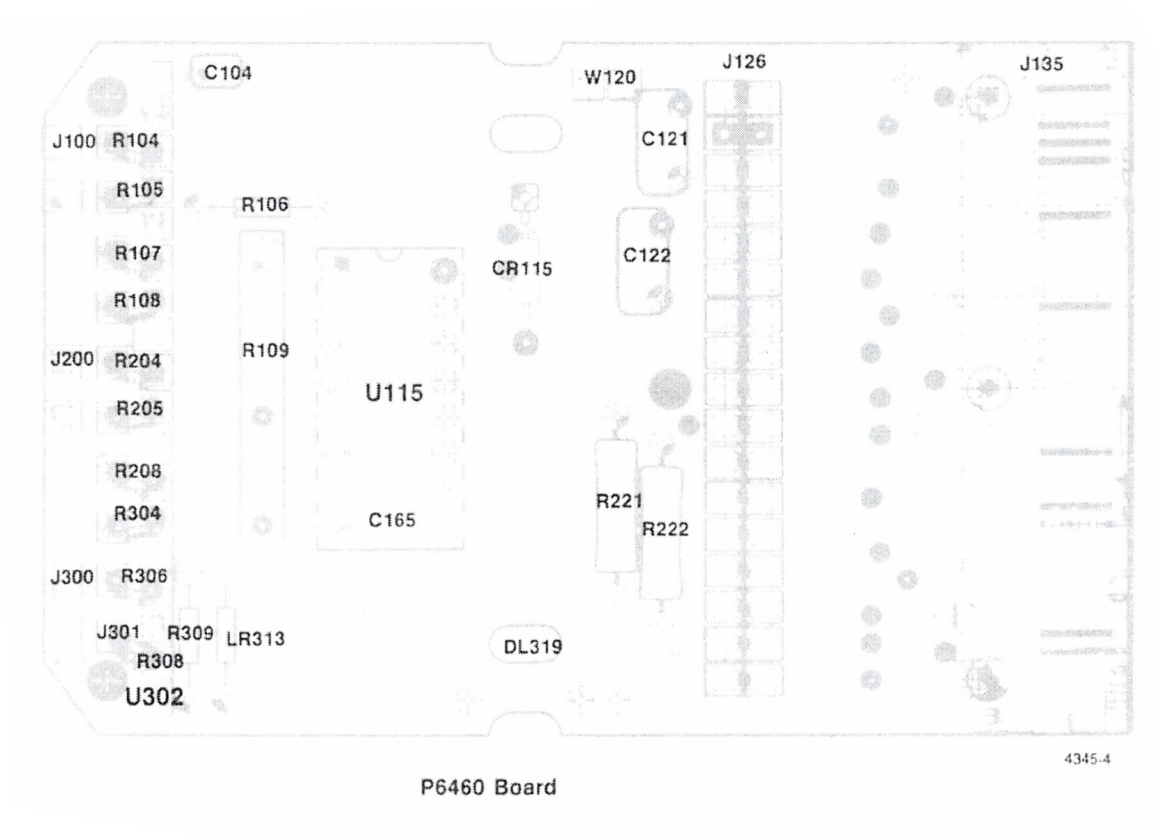
Component No.	Tektronix Part No.	Serial/Assembly No. Effective Discnt	Name & Description	Mfr. Code	Mfr. Part No.
A70	672-1119-02		CIRCUIT BD ASSY:MAIN	80009	672-1119-02
A70C104	283-0186-00		CAP,FXD,CER D1:27PF,5%,50V	04222	SR155A 270JAA
A70C121	283-0177-00		CAP,FXD,CER D1:1UF,+80-20%,25V	04222	SR305E105ZAA
A70C122	283-0177-00		CAP,FXD,CER D1:1UF,+80-20%,25V	04222	SR305E105ZAA
A70CR115	152-0333-00		SEMICON DVC,D1:5W,S1,55V,200MA,DO-35	07263	FDH-6012
A70DL319	175-1580-01		CABLE,SP,ELEC:26 AWG SOLID TWISTED PAIR	80009	175-1580-01
A70J100	131-1811-00		TERM SET,PIN:10,0.025 SQ ON 0.15 CTR (ALSO INCLUDES A70J200 & A70J300)	22526	65595-110
A70J126	131-2615-00		CONN,RCPT,ELEC:CKT BD,RTANG,17/34 CONT,MALE	22526	65820-005
A70J135	196-0797-00		FLEX CIRCUIT:36 CONDUCTOR,COPPER	80009	196-0797-00
A70J200	131-1811-00		TERM SET,PIN:10,0.025 SQ ON 0.15 CTR (ALSO INCLUDES A70J100 & A70J300)	22526	65595-110
A70J300	131-1811-00		TERM SET,PIN:10,0.025 SQ ON 0.15 CTR (ALSO INCLUDES A70J100 & A70J200)	22526	65595-110
A70J301	131-1812-00		TERM SET,PIN:10,0.025 SQ ON 0.15 CTR	22526	65603-110
A70R104	317-0111-00		RES,FXD,CMPSN:110 OHM,5%,0.125W	01121	BB1115
A70R105	317-0111-00		RES,FXD,CMPSN:110 OHM,5%,0.125W	01121	BB1115
A70R106	317-0100-00		RES,FXD,CMPSN:10 OHM,5%,0.125W	01121	BB1005
A70R107	317-0111-00		RES,FXD,CMPSN:110 OHM,5%,0.125W	01121	BB1115
A70R108	317-0111-00		RES,FXD,CMPSN:110 OHM,5%,0.125W	01121	BB1115
A70R109	307-0706-00		RES NTKW,FXD,FI:4,10K OHM,2%,0.2W EA	01121	208B103
A70R204	317-0111-00		RES,FXD,CMPSN:110 OHM,5%,0.125W	01121	BB1115
A70R205	317-0111-00		RES,FXD,CMPSN:110 OHM,5%,0.125W	01121	BB1115
A70R208	317-0111-00		RES,FXD,CMPSN:110 OHM,5%,0.125W	01121	BB1115
A70R221	321-0292-07		RES,FXD,FILM:10.7K OHM,0.1%,0.125W,TC=T9	24546	NE55E1072B
A70R222	321-0463-00		RES,FXD,FILM:649K OHM,1%,0.125W	19701	5033ED649KOF
A70R304	317-0111-00		RES,FXD,CMPSN:110 OHM,5%,0.125W	01121	BB1115
A70R306	317-0111-00		RES,FXD,CMPSN:110 OHM,5%,0.125W	01121	BB1115
A70R308	317-0111-00		RES,FXD,CMPSN:110 OHM,5%,0.125W	01121	BB1115
A70R309	317-0151-00		RES,FXD,CMPSN:150 OHM,5%,0.125W	01121	BB1515
A70R313	317-0510-00		RES,FXD,CMPSN:51 OHM,5%,0.125W	01121	BB5105
A70S100	260-0735-01		SWITCH,PUSH:T,NO CONTACT,BLACK BTN	81073	39-3
A70U115	156-0625-01		MICROCKT,DGTL:CMOS,8 BIT PRL	27014	74C165NA+
A70U302	-----		MICROCIRCUIT,D1:LOGIC ACQ CIRCUIT (NOT REPLACEABLE,ORDER 672-1119-01)		
A70W120	195-1715-00		LEAD,ELECTRICAL:26 AWG,2.5 L,9-2	80009	195-1715-00

Resistors — Ohms (Ω).

The information and special symbols below may appear in this manual.

corresponding component locator illustration. The Replaceable Electrical Parts list is arranged by assemblies in numerical sequence; the components are listed by component number *(see following illustration for constructing a component number).

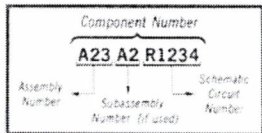




P6460 Board

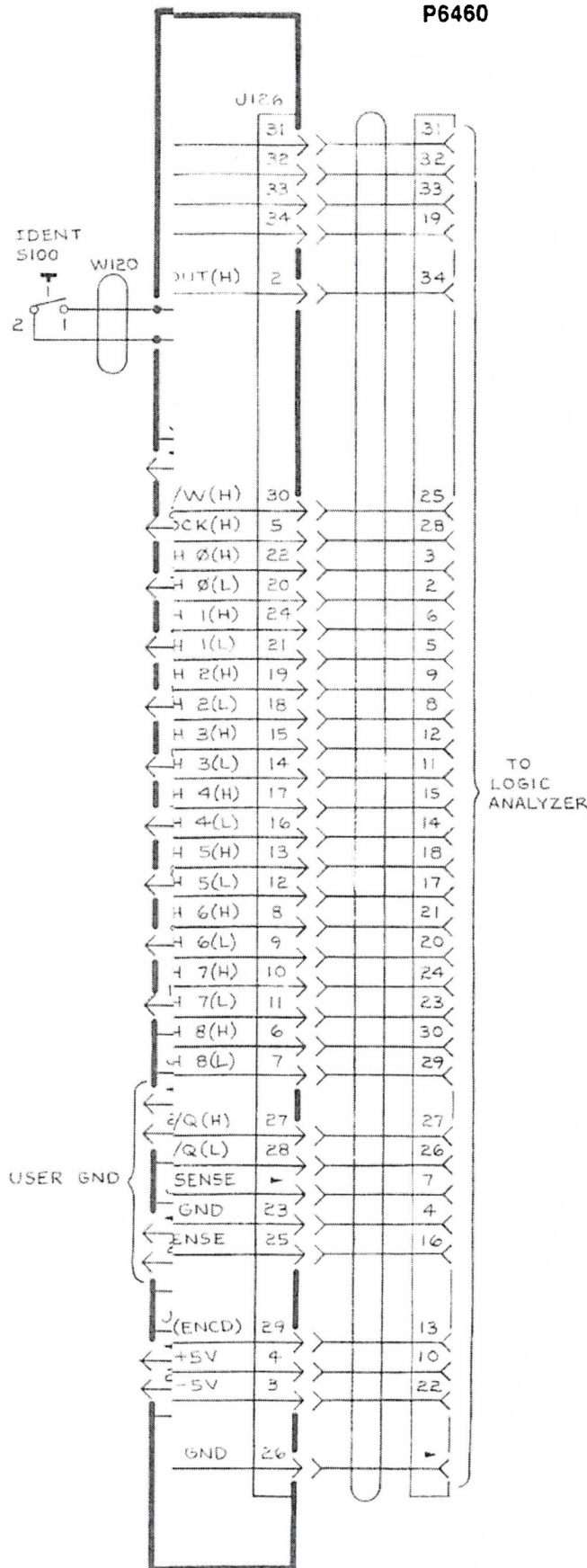
⚡ Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE



Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List

P6460



REPLACEABLE MECHANICAL PARTS

PARTS ORDERING INFORMATION

Replacement parts are available from or through your local Tektronix, Inc. Field Office or representative.

Changes to Tektronix instruments are sometimes made to accommodate improved components as they become available, and to give you the benefit of the latest circuit improvements developed in our engineering department. It is therefore important, when ordering parts, to include the following information in your order: Part number, instrument type or number, serial number, and modification number if applicable.

If a part you have ordered has been replaced with a new or improved part, your local Tektronix, Inc. Field Office or representative will contact you concerning any change in part number.

Change information, if any, is located at the rear of this manual.

SPECIAL NOTES AND SYMBOLS

X000 Part first added at this serial number
00X Part removed after this serial number

FIGURE AND INDEX NUMBERS

Items in this section are referenced by figure and index numbers to the illustrations.

INDENTATION SYSTEM

This mechanical parts list is indented to indicate item relationships. Following is an example of the indentation system used in the description column.

1	2	3	4	5	Name & Description
					<i>Assembly and/or Component</i>
					<i>Attaching parts for Assembly and/or Component</i>

					<i>Detail Part of Assembly and/or Component</i>
					<i>Attaching parts for Detail Part</i>

					<i>Parts of Detail Part</i>
					<i>Attaching parts for Parts of Detail Part</i>

Attaching Parts always appear in the same indentation as the item it mounts, while the detail parts are indented to the right. Indented items are part of, and included with, the next higher indentation. The separation symbol ---- indicates the end of attaching parts.

Attaching parts must be purchased separately, unless otherwise specified.

ITEM NAME

In the Parts List, an Item Name is separated from the description by a colon (:). Because of space limitations, an Item Name may sometimes appear as incomplete. For further Item Name identification, the U.S. Federal Cataloging Handbook H6-1 can be utilized where possible.

ABBREVIATIONS

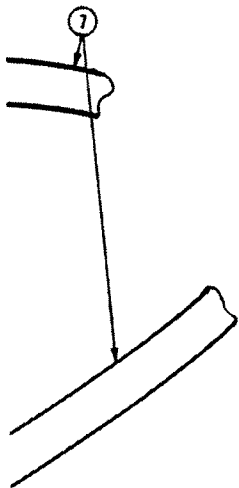
"	INCH	ELECTRN	ELECTRON	IN	INCH	SE	SINGLE END
#	NUMBER SIZE	ELEC	ELECTRICAL	INCAND	INCANDESCENT	SECT	SECTION
ACTR	ACTUATOR	ELECTLT	ELECTROLYTIC	INSUL	INSULATOR	SEMICON	SEMICONDUCTOR
ADPTR	ADAPTER	ELEM	ELEMENT	INTL	INTERNAL	SHLD	SHIELD
ALIGN	ALIGNMENT	EPL	ELECTRICAL PARTS LIST	LPHLDR	LAMPHOLDER	SHLDR	SHOULDERED
AL	ALUMINUM	EQPT	EQUIPMENT	MACH	MACHINE	SKT	SOCKET
ASSEM	ASSEMBLED	EXT	EXTERNAL	MECH	MECHANICAL	SL	SLIDE
ASSY	ASSEMBLY	FIL	FILLISTER HEAD	MTG	MOUNTING	SLFLKG	SELF-LOCKING
ATTEN	ATTENUATOR	FLEX	FLEXIBLE	NIP	NIPPLE	SLVG	SLEEVING
AWG	AMERICAN WIRE GAGE	FLH	FLAT HEAD	NON WIRE	NOT WIRE WOUND	SPR	SPRING
BD	BOARD	FLTR	FILTER	OB	ORDER BY DESCRIPTION	SO	SQUARE
BRKT	BRACKET	FR	FRAME or FRONT	OD	OUTSIDE DIAMETER	SST	STAINLESS STEEL
BRS	BRASS	FSTNR	FASTENER	OVH	OVAL HEAD	STL	STEEL
BRZ	BRONZE	FT	FOOT	PH BRZ	PHOSPHOR BRONZE	SW	SWITCH
BSHG	BUSHING	FXD	FIXED	PL	PLAIN or PLATE	T	TUBE
CAB	CABINET	GSKT	GASKET	PLSTC	PLASTIC	TERM	TERMINAL
CAP	CAPACITOR	HDL	HANDLE	PN	PART NUMBER	THD	THREAD
CER	CERAMIC	HEX	HEXAGON	PNH	PAN HEAD	THK	THICK
CHAS	CHASSIS	HEX HD	HEXAGONAL HEAD	PWR	POWER	TNSN	TENSION
CKT	CIRCUIT	HEX SOC	HEXAGONAL SOCKET	RCPT	RECEPTACLE	TPG	TAPPING
COMP	COMPOSITION	HLCPS	HELICAL COMPRESSION	RES	RESISTOR	TRH	TRUSS HEAD
CONN	CONNECTOR	HLEXT	HELICAL EXTENSION	RGD	RIGID	V	VOLTAGE
COV	COVER	HV	HIGH VOLTAGE	RLF	RELIEF	VAR	VARIABLE
CPLG	COUPLING	IC	INTEGRATED CIRCUIT	RTNR	RETAINER	W	WITH
CRT	CATHODE RAY TUBE	ID	INSIDE DIAMETER	SCM	SOCKET HEAD	WSHR	WASHER
DEG	DEGREE	IDENT	IDENTIFICATION	SCOPE	OSCILLOSCOPE	XFMR	TRANSFORMER
DWR	DRAWER	IMPLR	IMPELLER	SCR	SCREW	XSTR	TRANSISTOR

CROSS INDEX - MFR. CODE NUMBER TO MANUFACTURER

<u>Mfr. Code</u>	<u>Manufacturer</u>	<u>Address</u>	<u>City, State, Zip Code</u>
06383	PANDUIT CORP	17301 RIDGELAND	TINLEY PARK IL 07094-2917
22526	DU PONT E I DE NEMOURS AND CO INC	515 FISHING CREEK RD	NEW CUMBERLAND PA 17070-3007
	DU PONT CONNECTOR SYSTEMS		
	DIV MILITARY PRODUCTS GROUP		
73743	FISCHER SPECIAL MFG CO	111 INDUSTRIAL RD	COLD SPRING KY 41076-9749
77900	ILLINOIS TOOL WORKS	ST CHARLES RD	ELGIN IL 60120
	SHAKEPROOF DIV		
80009	TEKTRONIX INC	14150 SW KARL BRAUN DR	BEAVERTON OR 97077-0001
		PO BOX 500	
81073	GRAYHILL INC	561 HILLGROVE AVE	LA GRANGE IL 60525-5914
		PO BOX 10373	
TK1148	ACACIA SALES INC (DIST)	7763 SW CIRRRUS DR	BEAVERTON OR 97005-6452
		BLDG 26	
TK1319	MORELLIS Q & D PLASTICS	1812 16-TH AVE	FOREST GROVE OR 97116
TK1374	TRI-TEC ENGINEERING CORP	13130 S NORMANDIE	GARDENA CA 90249-2128
TK1415	CABOT CORP	7911 ZIONSVILLE RD	INDIANAPOLIS IN 46268
	E A R DIV		

Fig. & Index No.	Tektronix Part No.	Serial/Assembly No. Effective Dscont		Qty	12345 Name & Description	Mfr. Code	Mfr. Part No.
1-1	334-4855-00			1	MARKER, IDENT: MKD DIAGNOSTIC	80009	334-4855-00
-2	380-0711-00			1	HOUSING, PROBE: UPPER, PC (ATTACHING PARTS)	80009	380-0711-00
-3	211-0086-00			4	SCREW, MACHINE: 4-40 X 0.75, FLH, 100 DEG, STL	80009	211-0086-00
-4	210-0406-00			4	NUT, PLAIN, HEX: 4-40 X 0.188, BRS CD PL (END ATTACHING PARTS)	73743	12161-50
-5	358-0674-00			1	STRAIN RLF, CA: LOWER	80009	358-0674-00
-6	358-0675-00			1	STRAIN RLF, CA: UPPER	80009	358-0675-00
-7	175-6807-00	B010100	B036539	1	CA ASSY, PROBE: 2 METERS	TK1374	ORDER BY DESCR
	175-9843-00	B036540	B052755	1	CA ASSY, SP, ELEC: 22, 28 AWG, 76.0 L	TK1374	ORDER BY DESCR
	175-9843-01	B052756		1	CA ASSY, SP, ELEC: 22, 28 AWG, 76.0 L	TK1374	901951
-8	200-2731-00	B010100	B061398	2	COVER, HOLE: POLYCARBONATE, GRAY	80009	200-2731-00
	200-2731-00	B061399		3	COVER, HOLE: POLYCARBONATE, GRAY	80009	200-2731-00
-9	348-0782-00			2	CUSHION, HYBRID: SILICON SPONGE	80009	348-0782-00
-10	672-1119-02			1	CIRCUIT BD ASSY: MAIN	80009	672-1119-02
-11	131-1811-00			1	.TERM SET, PIN: 10, 0.025 SQ ON 0.15 CTR	22526	65595-110
-12	131-1812-00			1	.TERM SET, PIN: 10, 0.025 SQ ON 0.15 CTR	22526	65603-110
-13	361-0758-01			1	.SPACER, PROBE: ACETAL SLATE GRAY	80009	361-0758-01
-14	131-2615-00			1	.CONN, RCPT, ELEC: CKT BD, RTANG, 17/34 CONT, MALE	22526	65820-005
-15	260-0735-01			1	.SWITCH, PUSH: T, NO CONTACT, BLACK BTN (ATTACHING PARTS)	81073	39-3
-16	358-0660-00			1	.BUSHING, SW MTG: AL	80009	358-0660-00
-17	210-0008-00			1	.WASHER, LOCK: #8 INTL, 0.02 THK, STL (END ATTACHING PARTS)	77900	1208-00-00-0541C
-18	346-0120-00			2	.STRAP, TIEDOWN, E: 5.5 L MIN, PLASTIC, WHITE	06383	SST1.5M
-19	343-1095-00			1	.CLAMP, HYB CKT: 0.295 ID, ALUMINUM	80009	343-1095-00
-20	426-1985-00			1	.FRAME, WINDOW:	80009	426-1985-00
-21	386-5017-00			1	.PLATE, PRESSURE:	TK1319	386-5017-00
-22	343-1094-00			1	.RETAINER, CONN: SILICONE FOAM	TK1319	ORDER BY DESCR
-23	196-0797-00			1	.FLEX CIRCUIT: 36 CONDUCTOR, COPPER	80009	196-0797-00
-24	348-0390-00			1	CUSHION, PROBE: 1.5 X 2.0 X 0.125	TK1415	ORDER BY DESCR
-25	380-0710-00			1	HOUSING, PROBE: LOWER, PC *****STANDARD ACCESSORIES*****	80009	380-0710-00
	070-4345-00			1	SHEET, TECHNICAL: INSTR, 010-6460-00	80009	070-4345-00
	020-0720-00	B010100	B035539	1	ACCESSORY KIT: PKG OF 12, 206-0222-00	80009	020-0720-00
	020-1386-00	B035540		1	ACCESSORY KIT: PACKAGE OF 12 (013-0217-00)	80009	020-1386-00
	012-0747-00			1	LEAD SET, ELEC: 10 WIDE, 25 CML	80009	012-0747-00
	012-0989-00			2	LEAD SET: GROUND OR SENSE LEAD, W/CLIP	80009	012-0989-00
	334-4854-00			1	MARKER, IDENT: MKD DATA ACQUISITION PROBE	80009	334-4854-00
	334-4856-00			1	MARKER, IDENT: MKD P6460 ACQUISITION PROBE	80009	334-4856-00
	344-0046-00			2	CLIP, ELECTRICAL: ALLIGATOR, 1.56 L *****OPTIONAL ACCESSORIES*****	80009	344-0046-00
	003-0709-00			1	EXTRACTOR, IC: 16 PIN TEST CLIP	80009	003-0709-00
	012-0556-00			1	LEAD SET, ELEC: DIAGNOSTIC	TK1148	AS1 61500 REV A
	012-0800-00			1	LEAD SET, ELEC: 10 WIDE, 9.843 L	80009	012-0800-00
	012-0987-00			1	LEAD SET, ELEC: 10 WIDE, 5.0 L	80009	012-0987-00
	012-0989-01			1	LEAD SET: GROUND OR SENSE LEAD, W/CLIP	80009	012-0989-01
	012-1000-00			1	LEAD SET, ELEC: 12 WIDE, 10.0 L	80009	012-1000-00
	015-0330-00			1	ADPTR, TEST CLIP: 16 DIP	80009	015-0330-00
	015-0339-00			1	ADPTR, TEST CLIP: 40 DIP	80009	015-0339-00
	015-0339-02			1	ADPTR, TEST CLIP: 40 DIP	80009	015-0339-02
	103-0209-00			1	ADAPTER, CONN: GPIB TO PROBE	80009	103-0209-00
	380-0560-05			1	HOUSING, TERM: MALE ADAPTER	80009	380-0560-05

FIG. 1 EXPLODED



MANUAL CHANGE INFORMATION

At Tektronix, we continually strive to keep up with latest electronic developments by adding circuit and component improvements to our instruments as soon as they are developed and tested.

Sometimes, due to printing and shipping requirements, we can't get these changes immediately into printed manuals. Hence, your manual may contain new change information on following pages.

A single change may affect several sections. Since the change information sheets are carried in the manual until all changes are permanently entered, some duplication may occur. If no such change pages appear following this page, your manual is correct as printed.



INFORMATION SHEET

In order to improve reliability and performance, Tektronix has provided a new grabber tip to replace its old model.

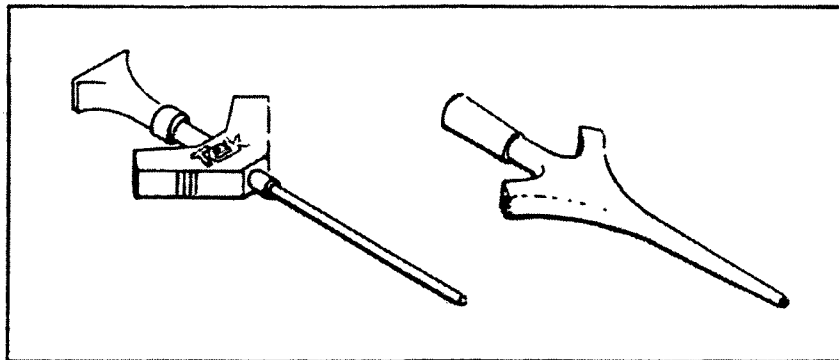
Replace:

013-0217-00 and 013-0225-00

With

206-0364-00

The figure below shows the new and old grabber tip.



206-0364-00

013-0217-00 (black)

&

013-0225-00 (yellow)

The new 206-0364-00 is a thinner, double-pole grabber tip, capable of connecting to a 50 mil centered IC leg. The old grabber tip could only connect to a 100 mil centered IC leg.

If you order grabber tips, be sure to order the new type (206-0364-00) in this Information Sheet. Do not order the old type (013-0217-00 or 013-0225-00) that are listed on your manual. It is recommended that you keep this sheet with your manual.